

REMARKS

This Response is submitted in reply to the non-final Office Action mailed on December 15, 2005. A petition for a two month extension of time is submitted herewith. The Director is authorized to charge \$450.00 for the petition for extension of time or any additional fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 112843-25 on the account statement.

Claims 1-2, 7-8 and 14-20 are pending in this application. Claims 3-6 and 9-13 were previously cancelled. In the Office Action, Claims 1-2, 7 and 19-20 are rejected under 35 U.S.C. §102 and Claims 1-2, 7-8 and 14-20 are rejected under 35 U.S.C. §103. For the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 1-2, 7 and 19-20 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,845,487 to Franz ("Franz"). Applicants respectfully disagree with and traverse this rejection for at least the reasons set forth below.

Independent Claims 1, 7 and 19 are directed, in part, to valve arrangement that includes a valve and a piston member. For example, the piston member includes a single stem and a mushroom shaped head having an apex. The apex engages a stopper adapted to resist a movement of the piston member and wherein the mushroom shaped head is deformable under pressure in a desired flow direction. In contrast, Applicants respectfully submit that *Franz* fails to disclose or suggest every element of the present claims.

For example, *Franz* fails to disclose or suggest a piston member a deformable mushroom shaped head having an apex as required, in part, by Claims 1, 7 and 19. *Franz* also fails to disclose or suggest that the apex engages a stopper adapted to resist a movement of the piston member as required, in part, by Claims 1, 7 and 19. In fact, the Patent Office has not even attempted to provide any specific support for the claim elements. Instead, *Franz* is directed to a two way valve that is a combination valve (see *Franz*, Figure 4 (40)) having a duck-bill check valve 42 extending into a central axial passage 37 and another valve 44 that extends into a bowl shaped recess 31. *Franz* fails to disclose or suggest the valves 42 or 44 deforming. Moreover, *Franz* fails to teach any type of stopper that engages an apex of either valves 42 or 44.

Franz also fails to teach a one-way valve (e.g. allowing flow of fluid in a first direction and preventing fluid flow in the reverse direction) and operates in a completely different manner than that of the present invention. Moreover, *Franz* fails to explicitly indicate any type of valve having a cracking pressure of 0.10 to 0.20 bar as a threshold pressure at which flow through the valve is allowed to occur.

For the reasons discussed above, Applicants respectfully submit that Claims 1, 7 and 19 and Claims 2 and 20 that depend from these claims are novel, nonobvious and distinguishable from the cited reference.

Accordingly, Applicants respectfully request that the rejection of Claims 1-2, 7 and 19-20 under 35 U.S.C. §102 be withdrawn.

In the Office Action, Claims 1-2, 7-8 and 14-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Franz* in view of U.S. Patent No. 5,244,463 to Cordner et al. ("Cordner") and U.S. Patent No. 5,009,654 to Minshall et al. ("Minshall"). Applicants believe this rejection is improper and respectfully traverse it for at least the reasons set forth below.

Independent Claims 1, 7, 14, 17 and 19 are directed, in part, to valve arrangement that includes a valve and a piston member. The piston member includes a single stem and a mushroom shaped head having an apex. The apex engages a stopper adapted to resist a movement of the piston member and wherein the mushroom shaped head is deformable under pressure in a desired flow direction. In contrast, Applicants respectfully submit that even if combinable all of the claimed elements are not taught or suggested by the cited references.

As discussed previously, *Franz* teaches a two way valve system for use in preventing fluid leakage/open flow in a pumping system. However, *Franz* fails to disclose or suggest a piston member a deformable mushroom shaped head having an apex or the apex engaging a stopper adapted to resist a movement of the piston member as required, in part, by the present claims. In addition, *Franz* fails to teach a one way valve or a cracking pressure of 0.10 to 0.20 bar for allowing flow to occur. As a result, *Franz* teaches a much more complicated system involving a great deal of effort to achieve a similar effect as the system of the present invention.

Minshall also fails to disclose or suggest a piston member a deformable mushroom shaped head having an apex or the apex engages a stopper adapted to resist a movement of the piston member as required, in part, by the present claims. In fact, *Minshall* fails to even disclose

a valve arrangement having any type of piston member. Similarly, *Cordner* fails to disclose or suggest a piston member a deformable mushroom shaped head having an apex or the apex engages a stopper adapted to resist a movement of the piston member as required, in part, by the present claims. *Cordner* also fails to even disclose any type of valve arrangement having a piston member.

For the reasons discussed above, even if combinable, *Franz*, *Minshall* and *Cordner* do not teach, suggest, or even disclose all of the elements of the present claims, and thus, fail to render the claimed subject matter obvious for at least these reasons.

Accordingly, Applicants respectfully request that the obviousness rejection with respect to Claims 1-2, 7-8 and 14-20 be reconsidered and the rejection be withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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